3GKW FLEX

-40°C to +120°C, 600/1000V



Construction
Conductor: Tinned Copper · Extra-Flexible Stranded
Insulation: Extruded · Halogen-Free XLPO

Thermal Characteristics
Operating Temperature: -40°C to +120°C
Thermal Endurance & Flexing Limit: +120°C (20,000 h fixed installation); +90°C (occasionally moved)
Max. Short-Circuit Temperature: +250°C (max. 5 s)
Min. Installation & Flexing Temperature: -25°C (installation); -40°C (occasionally moved); -50°C (static cold endurance)

Electrical Characteristics
Operating Voltage: 600/1000V
Test Voltage: 3500V / 5 min
Max. AC System Voltage (U0m/Um): 720/1200V AC
Max. Permitted DC Voltage (V0/Vm): 900/1500V DC

Application
Railway Rolling Stock Wiring: For protected fixed and cabinet wiring of power, auxiliary, control, and signaling circuits onboard rail vehicles.
Onboard Safety, Lighting & Auxiliary Circuits: For onboard safety loops, passenger-car lighting, door controls, HVAC modules, and auxiliary low-voltage distribution in rail vehicles.
Industrial Switchboards & Drives: For internal wiring of traction control cubicles, frequency converters, switchboards, and industrial power distribution panels.

General Characteristics
Reduced-Wall Space & Weight Savings: Thin-wall electron-beam cross-linked insulation reduces outer diameter and harness weight in high-density conduits and cabinets.
Oil, Fuel & Ozone Resistance: Resists mineral oils, diesel fuel, acid and alkali splashes, ozone, and weathering in demanding vehicle and rolling-stock service.
Electron-Beam Cross-Linked Durability: Electron-beam cross-linked polyolefin insulation resists melt-back, soldering heat, thermal aging, and mechanical cut-through.
Extra-Flexible Routing: Fine-wire extra-flexible tinned copper stranding simplifies tight-bend routing in compact switchgear, panels, and conduit runs.

Standards & Approvals
EN 50264-3-1: Railway rolling stock reduced-wall single-core power and control cables (0.6/1 kV, Category M)
EN 45545-2: Fire protection on railway vehicles (Hazard Levels HL1–HL3, R15 / R16)
Halogen-Free: EN 50525-1 Annex B / EN 50267-2-1 / IEC 60754-1 & IEC 60754-2
Low Smoke & Low Toxicity: IEC 61034-1 / IEC 61034-2 & EN 50305

Fire Performance
Fire Retardant: IEC 60332-1-2 / IEC 60332-3-24 / IEC 60332-3-25 / EN 50305

RoHS COMPLIANT REACH COMPLIANT

CASMO Part No.	Conductor			Cable		Max. DCR @20°C (Ω/km)	Nom. Cable Weight (kg/km)
	Conductor Size (mm²)	No. Of Strands	Nom. Strand Dia. (mm)	Nom. O.D. (mm)	O.D. Tolerance ± (mm)		
1120030-5X	0.5	16	0.20	1.95	0.2	40.1	10
1120030-75X	0.75	24	0.20	2.20	0.2	26.7	13
1120031X	1	32	0.20	2.40	0.2	20	15
1120031-5X	1.5	30	0.25	2.70	0.2	13.7	20
1120032-5X	2.5	49	0.25	3.30	0.2	8.21	32
1120034X	4	56	0.30	3.85	0.2	5.09	48
1120036X	6	84	0.30	4.35	0.2	3.39	69
11200310X	10	315	0.20	5.30	0.3	1.95	112
11200316X	16	490	0.20	6.90	0.3	1.24	172
11200325X	25	779	0.20	8.40	0.3	0.795	259

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CASMO Part No.	Conductor			Cable		Max. DCR @20°C (Ω/km)	Nom. Cable Weight (kg/km)
	Conductor Size (mm^2)	No. Of Strands	Nom. Strand Dia. (mm)	Nom. O.D. (mm)	O.D. Tolerance ± (mm)		
11200335X	35	1045	0.20	9.50	0.3	0.565	352
11200350X	50	969	0.25	11.90	0.3	0.393	518
11200370X	70	1355	0.25	14.10	0.5	0.277	724
11200395X	95	1850	0.25	15.40	0.5	0.21	927
112003120X	120	2331	0.25	17.40	0.5	0.164	1162
112003150X	150	2960	0.25	20.10	1.0	0.132	1509
112003185X	185	3700	0.25	22.00	1.0	0.108	1821
112003240X	240	4800	0.25	24.80	1.0	0.0817	2427
112003300X	300	4144	0.30	27.10	1.0	0.0654	3026
112003400X	400	5439	0.30	31.50	1.0	0.0495	3830

Table Notes

* Suffix "X" denotes the Extra-Flexible conductor version ("-" denotes decimal point, e.g., 1120031-5X = 1.5 mm^2). Standard insulation colour is Black (Green/Yellow and other colours available upon request).

† Cross-sections 70 mm^2 to 400 mm^2 incorporate a non-woven separator tape over the conductor for clean stripping. Cross-sections 0.5 mm^2 and 0.75 mm^2 are manufactured to EN 50264-3-1 Category M material and performance requirements.

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